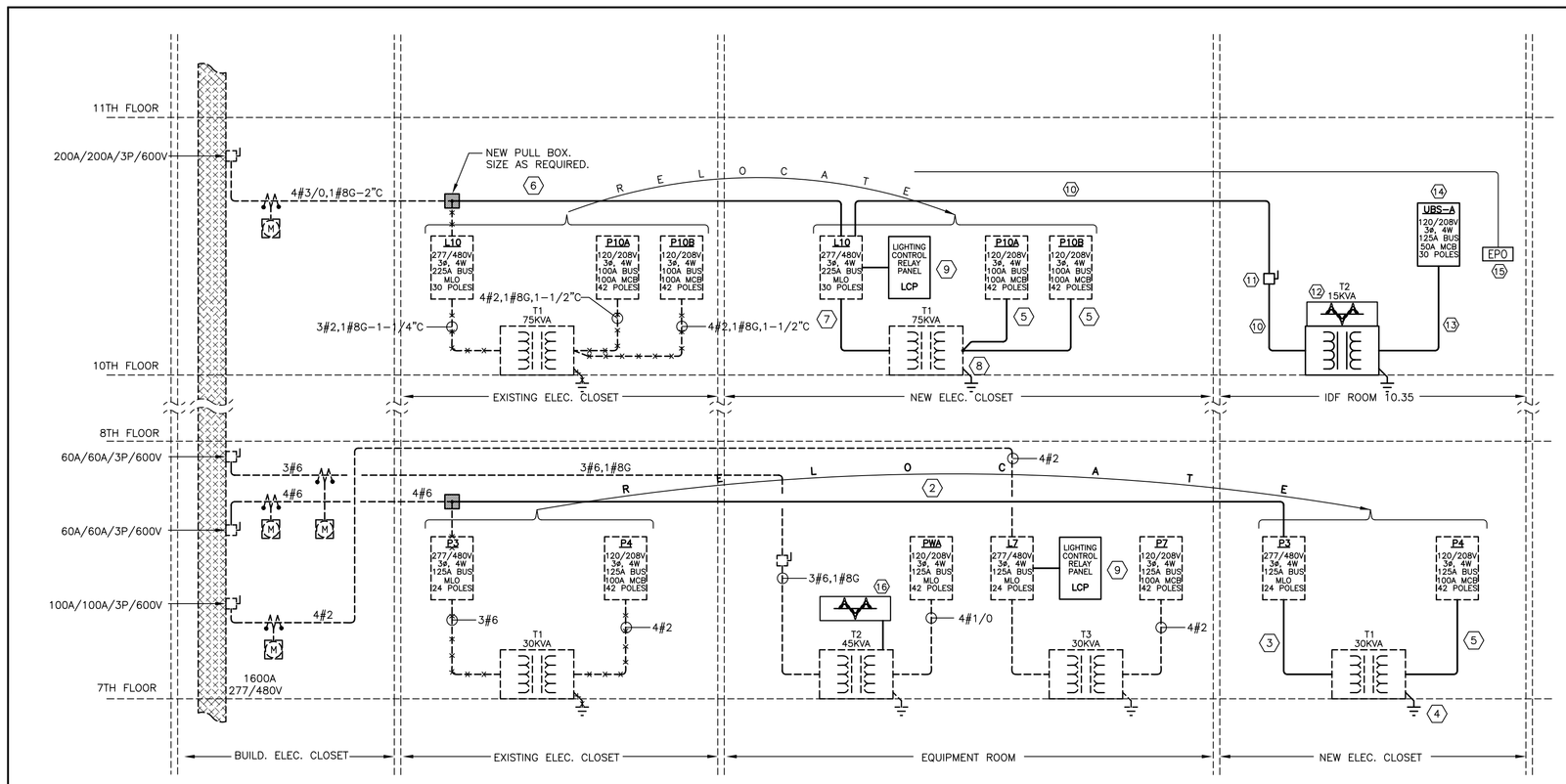


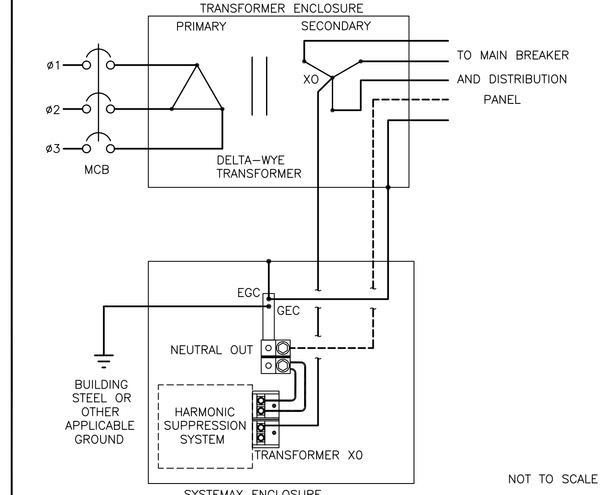
PARTIAL RISER DIAGRAM

SCHEMATIC ONLY

RISER DIAGRAM NOTES

1. SOLID LINES INDICATE NEW EQUIPMENT TO BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. DASHED LINES INDICATE EXISTING EQUIPMENT TO REMAIN. HATCHED LINES INDICATE EQUIPMENT TO BE REMOVED AND DISPOSED OF UNLESS INDICATED OTHERWISE. CONTACT THE ENGINEER FOR ALTERNATE OPTIONS IN CASE OF ANY DISCREPANCY.
2. EXTEND EXISTING 4 #6 FEEDER IN 1"C TO NEW LOCATION OF PANEL P3.
3. 3#6,1#10G – 3/4"C.
4. GROUND 30KVA TRANSFORMER TO THE NEAREST BUILDING STEEL WITH 1 #6 IN 1/2" EMT CONDUIT.
5. 4#2,1#8G – 1-1/4"C.
6. EXTEND EXISTING 4#3/0,1#8G FEEDER IN 2"C TO NEW LOCATION OF PANEL L10.
7. 3 #2,1 #8G – 1-1/4"C
8. GROUND 75KVA TRANSFORMER TO THE NEAREST BUILDING STEEL WITH 1 #2 IN 1/2" EMT CONDUIT.
9. F&I NEW NEW LIGHTING CONTROL PANEL LP8S-8-277 MANUFACTURED BY "WATT STOPPER".
10. 3#10,1#10G-3/4"C
11. FURNISH AND INSTALL NEW 30A, 3 POLE, 600V NON-FUSED DISCONNECT SWITCH.
12. SUPPLY AND INSTALL NEW 15KVA, FLOOR MOUNTED TRANSFORMER 480V PRIMARY 120-208V, 3ø, 4W SECONDARY, COPPER WINDINGS, 115°C TEMP. RISE, ELECTROSTATICALLY SHIELDED, GROUNDED WITH #6 IN 3/4"C TO NEAREST BUILDING STEEL WITH BUILT-IN HARMONIC FILTER AND SURGE PROTECTOR BY "HARMONICS LIMITED", "TRANSMAX PLUS" SERIES, MODEL NUMBER HLBNXT015-F2/F7. CONTACT MATTHEW RAIO FROM INTEGRA @ (516) 781-5862.
13. 4#8,1#10G-1"C
14. FURNISH AND INSTALL NEW 120/208V, 3ø, 4W, 125A BUS, 150A MCB, 42 POLE PANEL 'UBS-A'.
15. EMERGENCY POWER OFF STATION. SEE DETAIL IN DRAWING E-4B.
16. FURNISH AND INSTALL NEW 30KVA HARMONIC FILTER WITH BUILT-IN SURGE SUPPRESSOR "SYSTEMAX PLUS" SERIES, MODEL NUMBER HLNT030-F7. FILTER TO BE INSTALLED AS CLOSE AS POSSIBLE TO THE TRANSFORMER. CONTACT MATTHEW RAIO FROM INTEGRA @ (516) 781-5862. SEE CONNECTION DETAIL IN THIS DRAWING.

HARMONICS FILTER CONNECTION DETAIL



NOT TO SCALE

---- = NEUTRAL WIRE
EGC = EQUIPMENT GROUNDING CONDUCTOR
GEC = GROUNDING ELECTRODE CONDUCTOR

NEUTRAL AND GROUND WIRE SIZES TO BE THE SAME AS XFRMR'S SECONDARY SIDE FEEDER.

EXISTING

PANEL SCHEDULE

PANEL NO: L10
VOLTS (V): 120/208V PHASE: 3 WIRE: 4 COPPER BUS: 225A
MAIN CIRCUIT BREAKER: MLO MIN: 14,000 AIC SYMM.

CKT	TRIP AMPS	DESCRIPTION	A-PH(VA)	B-PH(VA)	C-PH(VA)	DESCRIPTION	TRIP AMPS	CKT
1	20/1	OFFICE LTG.	2170 4618			CRAC10-1	30/1	2
3	20/1	OFFICE LTG.		2544 4618		CRAC10-2	30/1	4
5	20/1	OFFICE LTG.			2009 3190	OPEN AREA LTG.	20/1	6
7	20/1	SPARE				SPARE	20/1	8
9	20/1	OPEN AREA LTG.		1266		SPARE	20/1	10
11	20/1	SPARE				SPARE	20/1	12
13	20/1	SPARE				SPARE	20/1	14
15	20/1	SPARE				SPARE	20/1	16
17	20/1	SPARE				SPARE	20/1	18
19			20278			SPARE	20/1	20
21	100/3	75KVA XFMR		18059		SPARE	20/1	22
23					16439	SPARE	20/1	24
25			4040			SPARE	20/1	26
27	25/3	PNL 'UBS-A' VIA 15KVA XFMR		4160		LCP	20/1	28
29					3740 2161	HP10-1	20/1	30
LCL x 1.25(VA)= 0			31106	30647	27539			
OTHER LOAD(VA)= 89292								
TOTAL LOAD(VA)= 89292			FEEDER AMPS = 107					

EXISTING

PANEL SCHEDULE

PANEL NO: P10A
VOLTS (V): 120/208 PHASE: 3 WIRE: 4 COPPER BUS: 100A
MAIN CIRCUIT BREAKER: 100A MIN: 10000 AIC SYMM.

CKT	TRIP AMPS	DESCRIPTION	A-PH(VA)	B-PH(VA)	C-PH(VA)	DESCRIPTION	TRIP AMPS	CKT
1	20/1	REFRIGERATOR	600 1200			PRINTERS	20/1	2
3	20/1	COFFEMAKER		1000 300		FAX	20/1	4
5	20/1	COFFEMAKER			1080 500	COPIER	20/1	6
7	20/1	PNTRY CONV. REC.	540 460			FLOOR REC.	20/1	8
9	20/1	MICROWAVE		1000 1200		PRINTERS	20/1	10
11	20/1	DISHWASHER			1000 600	COPY	20/1	12
13	20/1	PROJECTOR+SCRN	1000 600			COPY	20/1	14
15	20/1	CONV REC		1080 1200		PRINTERS	20/1	16
17	20/1	CONV REC			1080 250	VAV10-11,12,13,14,24	20/1	18
19	20/1	CONV REC	1080 200			VAV10-8,9,10,23	20/1	20
21	20/1	CONV REC		1080 200		VAV10-7,19,20,21	20/1	22
23	20/1	CONV REC			1080 200	VAV10-15,16,17,18	20/1	24
25	20/1	CONV REC	1080 200			VAV10-3,4,5,6	20/1	26
27	20/1	CONV REC.		1080 100		VAV10-1,2	20/1	28
29	20/1	CONV REC.			1080	SPARE	20/1	30
31	20/1	CONV REC.	1080 2309			SPARE	20/1	32
33	20/1	CONV REC		1080 2309		SPARE	201/1	34
35	20/1	CONV REC			1080 2309	SPARE	20/1	36
37	20/1	CONV REC.	1080 2309			SPARE	20/1	38
39	20/1	COPY		600 150		CP10-1	20/1	40
41	20/1	COPY			1200 180	LOW VOLTAGE LTG	20/1	42
LCL x 1.25 0			13738	12379	11639	* INDICATES HACR BREAKER		
OTHER LOAD(VA)= 37756								
TOTAL LOAD(VA)= 37756			FEEDER AMPS = 105					

EXISTING

PANEL SCHEDULE

PANEL NO: P10B
VOLTS (V): 120/208V PHASE: 3 WIRE: 4 COPPER BUS: 100A
MAIN CIRCUIT BREAKER: 100A MIN: 10,000 AIC SYMM.

CKT	TRIP AMPS	DESCRIPTION	A-PH(VA)	B-PH(VA)	C-PH(VA)	DESCRIPTION	TRIP AMPS	CKT
1	20/1	DATA RECEPTS.	960 1080			CONV. RECEPTS.	20/1	2
3	20/1	DATA RECEPTS.		960 1080		CONV. RECEPTS.	20/1	4
5	20/1	DATA RECEPTS.			720 1080	CONV. RECEPTS.	20/1	6
7	20/1	DATA RECEPTS.	960 540			CONV. RECEPTS.	20/1	8
9	20/1	DATA RECEPTS.		960 1000		CONV. RECEPTS.	20/1	10
11	20/1	DATA RECEPTS.			720 1080	CONV. RECEPTS.	20/1	12
13	20/1	DATA RECEPTS.	960 1080			CONV. RECEPTS.	20/1	14
15	20/1	DATA RECEPTS.		960		SPARE	20/1	16
17	20/1	DATA RECEPTS.			960	SPARE	20/1	18
19	20/1	DATA RECEPTS.	960			SPARE	20/1	20
21	20/1	DATA RECEPTS.		720		SPARE	20/1	22
23	20/1	DATA RECEPTS.			240	SPARE	20/1	24
25	20/1	SPARE				SPARE	20/1	26
27	20/1	SPARE				SPARE	20/1	28
29	20/1	SPARE				SPARE	20/1	30
31	20/1	SPARE				SPARE	20/1	32
33	20/1	SPARE				SPARE	20/1	34
35	20/1	SPARE				SPARE	30/2	36
37	20/1	SPARE				SPARE		38
39	30/2	SPARE				SPARE	20/1	40
41						SPARE	20/1	42
LCL x 1.25(VA)= 0			6540	5680	4800			
OTHER LOAD(VA)= 17020								
TOTAL LOAD(VA)= 17020			FEEDER AMPS = 47					

NEW

PANEL SCHEDULE

PANEL NO: UBS-A
VOLTS (V): 120/208V PHASE: 3 WIRE: 4 COPPER BUS: 125A
MAIN CIRCUIT BREAKER: 60A MIN: 10,000 AIC SYMM.

CKT	TRIP AMPS	DESCRIPTION	A-PH(VA)	B-PH(VA)	C-PH(VA)	DESCRIPTION	TRIP AMPS	CKT
1	20/1	NTWK RACK	1080 300			MISC. RACK	20/1	2
3	20/1	NTWK RACK		500 500		MISC. RACK	20/1	4
5	20/1	NTWK RACK			1080 500	FUTURE	20/1	6
7	20/1	NTWK RACK	1080 500			FUTURE	20/1	8
9	20/1	PATCH RACK		1080 1080		MISC. RACK	20/1	10
11	20/1	RECEPTS.			1080 1080	MISC. RACK	20/1	12
13	20/1	SPARE	1080			FUTURE	20/1	14
15	20/1	NTWK RACK		500 500		SEC. WALL	20/1	16
17	20/1	SPARE				SEC. WALL PLUGM.	20/1	18
19	20/1	SPARE				SPARE	20/1	20
21	20/1	SPARE				SPARE	20/1	22
23	20/1	SPARE				SPARE	20/1	24
25	20/2	SPARE				SPARE	20/1	26
27	20/1	SPARE				SPARE	20/1	28
29	20/1	SPARE				SPARE	20/1	30
LCL x 1.25(VA)= 0			4040	4160	3740			
OTHER LOAD(VA)= 11940								
TOTAL LOAD(VA)= 11940			FEEDER AMPS = 33					

EXISTING

PANEL SCHEDULE

PANEL NO: PWA
VOLTS (V): 120/208 PHASE: 3 WIRE: 4 COPPER BUS: 125A
MAIN CIRCUIT BREAKER: 125A MIN: 10000 AIC SYMM.

CKT	TRIP AMPS	DESCRIPTION	A-PH(VA)	B-PH(VA)	C-PH(VA)	DESCRIPTION	TRIP AMPS	CKT
1	20/1	SPARE	400			EXISTING	20/1	2
3	20/1	SPARE		400		EXISTING	20/1	4
5	20/1	SPARE			700	NETWORK RACK	20/1	6
7	20/1	SPARE	700			NETWORK RACK	20/1	8
9	20/1	SPARE		750		EXISTING	20/1	10
11	20/1	SPARE				SPARE	20/1	12
13	20/1	SPARE	400			EXISTING	20/1	14
15	20/1	SPARE		300		EXISTING	20/1	16
17	20/1	SPARE			200	PATCH RACK	20/1	18
19	20/1	SPARE	200			PATCH RACK	20/1	20
21	20/1	SPARE				SPARE	20/1	22
23	20/1	SPARE			800	MISC. RACK	20/1	24
25	20/1	SPARE	800			MISC. RACK	20/1	26
27	20/1	SPARE				SPARE	20/1	28
29	20/1	SPARE				SHUMT TRIP	20/1	30
31	20/1	SPARE				SPARE	20/1	32
33	20/1	SPARE				SPARE	20/1	34
35	20/1	SPARE				SPARE	20/1	36
37	20/1	SPARE				SPARE	20/1	38
39	20/1	SPARE				SPARE	20/1	40
41	20/1	SPARE				SPARE	20/1	42
LCL x 1.25(VA)= 0			2500	1450	1700			
OTHER LOAD(VA)= 5650								
TOTAL LOAD(VA)= 5650			FEEDER AMPS = 16					

EXISTING

PANEL SCHEDULE

PANEL NO: P-7
VOLTS (V): 120/208V PHASE: 3 WIRE: 4 COPPER BUS: 125A
MAIN CIRCUIT BREAKER: 100A MIN: 10,000 AIC SYMM.

CKT	TRIP AMPS	DESCRIPTION	A-PH(VA)	B-PH(VA)	C-PH(VA)	DESCRIPTION	TRIP AMPS	CKT
1	30/2*	CAC-1	2400 1000			COFFEMAKER	20/1	2
3				2400 1000		COFFEMAKER	20/1	4
5	20/1	DISHWASHER			1000 600	REFRIGERATOR	20/1	6
7	20/1	PRINTERS/FAXES	1200 1000			MICROWAVE	20/1	8
9	20/1	PRINTERS/FAXES		1200 1080		CONV. RECEPTS.	20/1	10
11	20/1	PRINTERS/FAXES			1200 900	CONV. RECEPTS.	20/1	12
13	20/1	CONV. RECEPTS.	1080 1000			COPIER	20/1	14
15	20/1	CONV. RECEPTS.		1080 1200		PRINTERS	20/1	16
17	20/1	CONV. RECEPTS.			1080 1200	PRINTERS	20/1	18
19	20/1	CONV. RECEPTS.	900 900			CONV. RECEPTS.	20/1	20
21	20/1	CONV. RECEPTS.		1080 600		PRINTER	20/1	22
23	20/1	CONV. RECEPTS.			1080 720	CONV. RECEPTS.	20/1	24
25	20/1	CONV. RECEPTS.	1080 720			CONV. RECEPTS.	20/1	26
27	20/1	CONV. RECEPTS.		1080 200		VAV10-11,12,13,24	20/1	28
29	20/1	CONV. RECEPTS.			1080 200	VAV10-9,10,14,23	20/1	30
31	20/1	PRITNERS/FAXES	1200 300			VAV10-6,7,8,20,21,22	20/1	32
33	20/1	PRINTERS/FAXES		1200 150		VAV10-15,16,17	20/1	34
35	20/1	PRINTERS			1200 200	VAV10-3,4,5,19	20/1	36
37	20/1	COPIER	1000 150			VAV10-1,2,18	20/1	38
39	20/1	COPIER		1000 1200		PRINTERS/FAXES	20/1	40
41	20/1	CONV. RECEPTS.			1080 1200	PRINTERS/FAXES	20/1	42
LCL x 1.25(VA)= 0			13930	14470	12740	* EXISTING TO REMAIN		
OTHER LOAD(VA)= 41140								
TOTAL LOAD(VA)= 41140			FEEDER AMPS = 114					

EXISTING

PANEL SCHEDULE

PANEL NO: P-3
VOLTS (V): 277/480V PHASE: 3 WIRE: 4 COPPER BUS: 125A
MAIN CIRCUIT BREAKER: MLO MIN: 10,000 AIC SYMM.

CKT	TRIP AMPS	DESCRIPTION	A-PH(VA)	B-PH(VA)	C-PH(VA)	DESCRIPTION	TRIP AMPS	CKT
1		SPACE				SPACE		2
3		SPACE				SPACE		4
5		SPACE				SPACE		6
7		SPACE				SPACE		8
9		SPACE				SPACE		10
11		SPACE				SPACE		12
13	20/1	SPARE				SPACE		14
15	20/1	SPARE					20/1	16
17	20/1	SPARE					20/1	18
19	20/1	SPARE	5400					20
21	20/1	SPARE		4920		30KVA XFMR	60/3	22
23	20/1	SPARE			5520			24
LCL x 1.25(VA)= 0			5400	4920	5520	* EXISTING TO REMAIN		
OTHER LOAD(VA)= 15840								
TOTAL LOAD(VA)= 15840			FEEDER AMPS = 19					

EXISTING

PANEL SCHEDULE

PANEL NO: P-4
VOLTS (V): 120/208V PHASE: 3 WIRE: 4 COPPER BUS:
MAIN CIRCUIT BREAKER: 100A MIN: 10,000 AIC SYMM.

CKT	TRIP AMPS	DESCRIPTION	A-PH(VA)	B-PH(VA)	C-PH(VA)	DESCRIPTION	TRIP AMPS	CKT
1	20/1	DATA RECEPTS.	960 720			CONV. RECEPTS.	20/1	2
3	20/1	DATA RECEPTS.		720 360		POKE-THRU REC.	20/1	4
5	20/1	DATA RECEPTS.			960 1080	CONV. RECEPTS.	20/1	6
7	20/1	DATA RECEPTS.	960 1080			CONV. RECEPTS.	20/1	8
9	20/1	DATA RECEPTS.		720 900		CONV. RECEPTS.	20/1	10
11	20/1	DATA RECEPTS.			720	SPACE		12
13	20/1	DATA RECEPTS.	960			SPACE		14
15	20/1	DATA RECEPTS.		960 540		CONV. RECEPTS.	20/1	16
17	20/1	DATA RECEPTS.			720 1080	CONV. RECEPTS.	20/1	18
19	20/1	DATA RECEPTS.	720			SPARE	20/1	20
21	20/1	DATA RECEPTS.		720		SPARE	20/1	22
23	20/1	DATA RECEPTS.			960	SPARE	20/1	24
25	20/1	SPARE				SPARE	20/1	26
27	20/1	SPARE				SPARE	20/1	28
29	20/1	SPARE				SPARE	20/1	30
31	20/1	SPARE				SPARE	20/1	32
33	20/1	SPARE				SPARE	30/1	34
35	20/1	SPARE				SPARE		36
37	20/1	SPARE				SPARE	20/1	38
39	20/1	SPARE				SPARE	20/1	40
41	20/1	SPARE				SPARE	20/1	42
LCL x 1.25(VA)= 0			5400	4920	5520			
OTHER LOAD(VA)= 15840								
TOTAL LOAD(VA)= 15840			FEEDER AMPS = 44					

EXISTING

PANEL SCHEDULE

PANEL NO: L7
VOLTS (V): 277/480V PHASE: 3 WIRE: 4 COPPER BUS: 125A
MAIN CIRCUIT BREAKER: MLO MIN: 14,000 AIC SYMM.

CKT	TRIP AMPS	DESCRIPTION	A-PH(VA)	B-PH(VA)	C-PH(VA)	DESCRIPTION	TRIP AMPS	CKT
1	20/1	OFFICE LTG.	1132 1076			OFFICE LTG.	20/1	2
3	20/1	OFFICE LTG.		2636 2388		OPEN AREA LTG.	20/1	4
5	20/1	SPARE			1864	RECEPTION LTG.	20/1	6
7	20/1	EWH-1.7	3000			SPARE	20/1	8
9	30/1	SPACE				SPARE	20/1	10
11		SPACE			550	EM-LIGHTS	20/1	12
13		SPACE	13930					14
15		SPACE		14470		30 KVA XFMR	40/3*	16
17		SPACE			12740			18
19		SPACE						20
21		SPACE				SPARE	50/3	22
23	20/1	LCP						24
LCL x 1.25(VA)= 0			19138	19494	15154	* EXISTING TO REMAIN		
OTHER LOAD(VA)= 53786								
TOTAL LOAD(VA)= 53786			FEEDER AMPS = 65					

LIGHTING CONTROL SCHEDULE

PANEL ID	NAME	LOCATION	TYPE	INTERIOR/ENCLOSURE	POWER SUPPLY	CIRCUIT
LP8S	LCP-7	EQUIPMENT ROOM	LP8S	8 RELAY SURFACE	277V	L7-23

RELAY	CIRCUIT	DESCRIPTION	REFERENCE
1	L7-4	OPEN AREA Z1	OVERRIDE BY OCCUPANCY SENSOR
2	SPARE		
3	SPARE		
4	SPARE		
5	SPARE		
6	SPARE		
7	SPARE		
8	SPARE		

LIGHTING CONTROL SCHEDULE

PANEL ID	NAME	LOCATION	TYPE	INTERIOR/ENCLOSURE	POWER SUPPLY	CIRCUIT
LP8S	LCP-10	NEW ELECTRICAL CLOSET	LP8S	8 RELAY SURFACE	277V	L10-40

RELAY	CIRCUIT	DESCRIPTION	REFERENCE
1	L10-7	OPEN AREA Z1	OVERRIDE BY OCCUPANCY SENSOR
2	L10-9	OPEN AREA Z2	OVERRIDE BY OCCUPANCY SENSOR
3	SPARE		
4	SPARE		
5	SPARE		
6	SPARE		
7	SPARE		
8	SPARE		

UBS

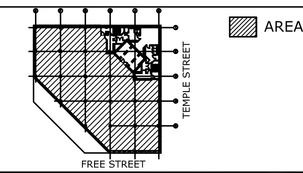
REVISIONS

NO.	DATE	DESCRIPTION

NO.	DATE	COPIES	TO WHOM
2	07.13.07		ISSUE FOR BID
1	07.13.07		ISSUE FOR PERMIT

ISSUE

KEY PLAN



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PROJECT NUMBER	RISER DIAG. & PANEL SCHEDULES
SCALE	N.T.S
DATE	05.16.07
PROJECT MANAGER	
PROJECT ARCHITECT	
DRAWN BY	RE
CHECKED BY	GB
CADD FILE	

UBS
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PORTLAND, ME 04101

E-4